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ning of each regular issue of the PCT Gazette.

(54) Title: GAS-PHASE OLEFIN POLYMERIZATION PROCESS

(57) Abstract: A continuous process for the olefin polymerization in a fluidized bed reactor, said process comprising continuously passing a gaseous stream comprising one or more  $\alpha$ -olefin monomers through the fluidized bed in the presence of a polymeriza-  
tion catalyst under reactive conditions, withdrawing polymeric product and unreacted fluids from the reactor, cooling part of said  
unreacted fluids below the dew point to form a two-phase mixture of gas and condensed liquid and reintroducing said two-phase  
mixture into the reactor, the process being characterized in that said twophase mixture is reintroduced under the distribution plate  
of the reactor so that a part of condensed liquid is separated from the gas and is successively fed above the fluidized bed through an  
external pipe connecting the bottom of the reactor to a point situated above the upper limit of the fluidized bed of polymer particles.

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